

Claims

- 1) Driver for a Pockels cell arranged in H-configuration, characterized by switches (S1B, S2B) that are wired parallel to the recharging resistors (R1, R2) or replace these resistors.
- 2) Driver for a Pockels cell according to claim 1, characterized by a resistor (R2) and a switch (S2B) being wired in parallel.
- 3) Driver for a Pockels cell according to claim 1, characterized by switches (S1B, S2B) that replace the recharging resistors (R1, R2).
- 4) Driver for a Pockels cell with a first node (SK1) that is connected to a first connector of the Pockels cell and a second node (SK2) that is connected to a second connector of the Pockels cell, whereas the first node (SK1) is connected via a first wire to the first potential (HV) and via a second wire containing a switch (S1) to a second potential, whereas the second node (SK2) is connected via a third wire to the first potential (HV) and via a fourth wire containing a switch (S2) to a second potential, characterized by at least one further switch (S1B, S2B) that connects one or both of the nodes (SK1, SK2) to the first potential (HV).
- 5) Driver for a Pockels cell according to claim 4, characterized by recharging resistors (R1, R2) which connect the nodes (SK1, SK2) to the first potential (HV) and a further switch (S2B) which connects the second node (SK2) to the first potential (HV).
- 6) Driver for a Pockels cell according to claim 4, characterized by nodes (SK1, SK2) which are connected with a single wire containing switches (S1B, S2B) to the first potential (HV).
- 7) Driver for a Pockels cell according to claim 4, characterized by low voltage control signals that individually control each of the three or four switches (S1A, S1B, S2A, S2B) of the circuit.

- 8) Driver for a Pockels cell according to claim 4, characterized by only two control signals (ON, OFF) which control all three or four switches (S1A, S1B, S2A, S2B) such that one of the control signals (ON) induces voltage to be applied to the Pockels cell, and the other control signal (OFF) induces the removal of voltage from the Pockels cell.
- 9) Pockels cell with a driver circuit according to claim 4.
- 10) Application of at least one Pockels cell according to claim 9 within a pulsed laser system.
- 11) Application according to claim 10, whereas the laser system comprises a laser source (1) with a laser resonator, the Pockels cell being arranged internally or externally to the laser resonator.
- 12) Application according to claims 10, whereby the laser system comprises a pulsed laser source (1) and an optical amplifier (4), the Pockels cell being arranged within the optical amplifier (4).
- 13) Application according to claim 10 for an optical pump-/probe-procedure, whereas an optical excitation pulse and a delayed optical monitoring pulse is directed onto a medium, whereas the signal induced by the delayed monitoring pulse is measured as a function of delay between the two pulses, whereas the pulse sequence of pump- and probe-pulse and the delay from one to another is determined by the Pockels cell and the driver of that Pockels cell.
- 14) Application according to claim 10 for a materials processing procedure, whereby a first laser pulse is directed onto the surface of the material creating a plasma, whereby after some delay a further number of pulses is directed onto the plasma above the surface of the material, whereby the first laser pulse and the further number of laser pulses is determined by the Pockels cell and its driver.